

Simulating Interferometric Imaging with the FKSI

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The Fourier Kelvin Stellar Interferometer (FKSI) is a mission concept for an imaging and nulling interferometer for the mid-infrared spectral region (5–28 μm). It is conceived as a pathfinder to the Terrestrial Planet Finder (TPF) and its scientific goals include detection and characterization of extra-solar giant planets and protostellar systems. One possible design being studied is fully capable of imaging interferometry with five 1-m diameter telescopes arranged along a truss in a linear non-redundant array. We present here simulations of the synthesis imaging capability of this design in order to gauge the impact of critical design parameters on the quality of images, sensitivity and dynamic range. In this poster we simulate imaging of circumstellar dust-disks, including clumpy exo-zodi disks, which form an important class of targets for the FKSI mission.

